

CLAIMS

1. A method for inducing T cell tolerance to a donor tissue or organ in a recipient of the tissue or organ comprising administering to the recipient

5 a) an allogeneic or xenogeneic cell which expresses at least one donor antigen and which has a ligand on a cell surface which interacts with a receptor on a surface of a recipient T cell which mediates contact-dependent helper effector function; and

b) an antagonist of the receptor on the surface of the T cell which inhibits interaction of the ligand with the receptor.

10 2. The method of claim 1, wherein the receptor on the surface of the recipient T cell which mediates contact-dependent helper effector function is gp39.

3. The method of claim 2, wherein the antagonist is an anti-gp39 antibody.

15 4. The method of claim 3, wherein the anti-gp39 antibody is a monoclonal antibody.

20 5. The method of claim 3, wherein the anti-gp39 antibody is an anti-human gp39 antibody.

6. The method of claim 4, wherein the monoclonal antibody is MR1.

25 7. The method of claim 4, wherein the monoclonal antibody is a chimeric monoclonal antibody.

8. The method of claim 4, wherein the monoclonal antibody is a humanized monoclonal antibody.

30 9. The method of claim 1, wherein the allogeneic or xenogeneic cell is a lymphoid cell.

10. The method of claim 9, wherein the lymphoid cell is a B cell.

35 11. The method of claim 10, wherein the B cell is a resting B cell.

12. The method of claim 1, wherein the allogeneic or xenogeneic cell and the antagonist are administered to the recipient prior to transplantation of the tissue or organ.

13. The method of claim 1, wherein the tissue or organ comprises pancreatic islets.

14. The method of claim 1, wherein the tissue or organ is selected from the group consisting of liver, kidney, heart, lung, skin, muscle, neuronal tissue, stomach and intestine.

15. A method for inducing T cell tolerance to a donor tissue or organ in a recipient of the tissue or organ comprising administering to the recipient

- a) an allogeneic or xenogeneic cell which expresses at least one donor antigen; and
- b) a gp39 antagonist.

16. The method of claim 15, wherein the gp39 antagonist is an anti-gp39 antibody.

17. The method of claim 16, wherein the anti-gp39 antibody is a monoclonal antibody.

18. The method of claim 16, wherein the anti-gp39 antibody is an anti-human gp39 antibody.

19. The method of claim 17, wherein the monoclonal antibody is MR1.

20. The method of claim 17, wherein the monoclonal antibody is a chimeric monoclonal antibody.

21. The method of claim 17, wherein the monoclonal antibody is a humanized monoclonal antibody.

22. The method of claim 15, wherein the gp39 antagonist is a soluble form of a gp39 ligand.

23. The method of claim 22, wherein the soluble form of a gp39 ligand is a CD40 fusion protein.

24. The method of claim 15, wherein the allogeneic or xenogeneic cell is a lymphoid cell.

25. The method of claim 24, wherein the lymphoid cell is a B cell.

26. The method of claim 25, wherein the B cell is a resting B cell.

27. The method of claim 15, wherein the allogeneic or xenogeneic cell and the antagonist are administered to the recipient prior to transplantation of the tissue or organ.

28. The method of claim 15, wherein the tissue or organ comprises pancreatic islets.

29. The method of claim 15, wherein the tissue or organ is selected from the group consisting of liver, kidney, heart, lung, skin, muscle, neuronal tissue, stomach and intestine.

30. A method for treating diabetes comprising administering to a subject in need of treatment:

- a) an allogeneic or xenogeneic cell which expresses at least one donor antigen;
- b) a gp39 antagonist; and
- c) donor pancreatic islet cells.

31. The method of claim 30, wherein the anti-gp39 antibody is a monoclonal antibody.

32. The method of claim 30, wherein the anti-gp39 antibody is an anti-human gp39 antibody.

33. The method of claim 31, wherein the monoclonal antibody is MR1.

34. The method of claim 31, wherein the monoclonal antibody is a chimeric monoclonal antibody.

35. The method of claim 31, wherein the monoclonal antibody is a humanized monoclonal antibody.

36. The method of claim 30, wherein the gp39 antagonist is a soluble form of a gp39 ligand.

37. The method of claim 36, wherein the soluble form of a gp39 ligand is a CD40 fusion protein.

38. The method of claim 30, wherein the allogeneic or xenogeneic cell is a lymphoid cell.

40. The method of claim 38, wherein the lymphoid cell is a B cell.

41. The method of claim 40, wherein the B cell is a resting B cell.

42. The method of claim 30, wherein the allogeneic or xenogeneic cell and the antagonist are administered to the recipient prior to transplantation of the pancreatic islet cells.

43. A method for inducing T cell tolerance to a donor tissue or organ in a recipient of the tissue or organ comprising administering to the recipient

a) a donor allogeneic cell; and

b) an anti-gp39 antibody,

wherein the donor allogeneic cell and the anti-gp39 antibody are administered to the recipient prior to transplantation of the tissue or organ.

44. The method of claim 43, wherein the anti-gp39 antibody is a monoclonal antibody.

45. The method of claim 43, wherein the anti-gp39 antibody is an anti-human gp39 antibody.

46. The method of claim 44, wherein the monoclonal antibody is MR1.

47. The method of claim 45, wherein the monoclonal antibody is a chimeric monoclonal antibody.

48. The method of claim 45, wherein the monoclonal antibody is a humanized monoclonal antibody.

49. The method of claim 43, wherein the donor allogeneic cell is a lymphoid cell.

50. The method of claim 49, wherein the lymphoid cell is a B cell.

51. The method of claim 50, wherein the B cell is a resting B cell.